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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,326	07/24/2003	Dan M. Ionel	010121-9916	1357

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MICHAEL BEST & FRIEDRICH, LLP
100 E WISCONSIN AVENUE
MILWAUKEE, WI 53202

EXAMINER

NGUYEN, TRAN N

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/626,326	Applicant(s) IONEL ET AL.	
	Examiner Tran N. Nguyen	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 01 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 27-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restriction

1. Applicant's election of **claims 1-26**, filed on 7/1/04, is acknowledged.

The applicant argues that the examination of the claims of Groups I and II can be made without serious burden on the Examiner. Applicants point out to the Examiner that, for example, claim one is directed to an electrical machine having an output rating comprising, among other things, a rotor and a stator. Claim 27 is directed to a method of manufacturing an electrical machine having a desired output rating comprising the acts of, among other acts, producing a rotor, and producing a stator. Both of these claims are directed to electrical machines having a rotor and stator.

In response to the applicant's argument that the method claims and the structure claims are independent from one another, even though they are related in term of dynamoelectric machinery art. They are independently distinct in term of the process of making and the structure of the device. The fields of search for a method of making a device and for a structure of the device, i.e., the product, are not coextensive, and determinations of patentability for claims of a method of making a device and claims of the device's structure are different.

In the determinations of patentability for claims of a method of making a device, the fabrication process includes its sequential order of fabricating steps and/or tools used in these steps of forming the device are considered significant.

On the contrary, in the determinations of patentability for claims of the device's structure the limitations of device's elements and their structural relationships as well as their functional/operational relationships are considered significant. In other words, in the device claimed invention, or in a product-by-process feature of a device, the method of forming the device is not germane to the issue of patentability of the device itself. (*In re Thorpe*, 227 USPQ 964, 966.)

Therefore, The fields of search for a method of making a device and for a structure of the device, i.e., the product, are not coextensive and the consideration for patentabilities are different and independent. This is the reason why there are two different and separate classifications for the method of forming the lamination core and the lamination core structure.

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Thus, the Examiner acknowledges that the *applicant has selected group I which is structure claims in response to the restriction*, set forth in the previous Office Action, which is deemed to be proper and hereby made FINAL.

Claim Rejections - 35 USC § 112

2. Claims 4 and 23-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4 and 23-26 recite functional operation of the machine, i.e., output rating, instead of further limit the *structure* of the machine.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-3** are rejected under 35 U.S.C. 102(b) as being fully anticipated by **Iwaki et al (US 6,384,503)**.

Iwaki discloses an electrical machine having an output rating, the electrical machine comprising:

a shaft (36) rotatable about an axis;

a rotor (10-12) (figs 1-2, 6-8) coupled to the shaft and rotating with the shaft, the rotor configured to include a first rotor portion when the output rating is a first rating and include a second rotor portion when the output rating is a second rating; and a stator including a stator core having a fixed cross-sectional profile with respect to the axis, the stator core configured to be

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disposed adjacent to the first rotor portion when the output rating is the first rating and disposed adjacent to the second rotor portion when the output rating is the second rating, wherein

the second rotor portion includes the first rotor portion (figs 6-8);

the rotor is configured to include a third rotor portion (fig 7) when the output rating is a third rating, the third rotor portion including the first and second rotor portions, and wherein the stator core is configured to be disposed adjacent the third rotor portion when the output rating is the third rating.

4. **Claims 1-3** are rejected under 35 U.S.C. 102(b) as being fully anticipated by **Hoemann et al (US 5,034,642)**.

Hoemann discloses an electrical machine having an output rating, the electrical machine comprising:

a shaft (23) rotatable about an axis;

a rotor (11) (figs 1-7) coupled to the shaft and rotating with the shaft, the rotor configured to include a first rotor portion when the output rating is a first rating and include a second rotor portion when the output rating is a second rating; and a stator including a stator core having a fixed cross-sectional profile with respect to the axis, the stator core configured to be disposed adjacent to the first rotor portion when the output rating is the first rating and disposed adjacent to the second rotor portion when the output rating is the second rating, wherein the second rotor portion includes the first rotor portion (figs 1, 6-7);

the rotor is configured to include a third rotor portion (fig 7) when the output rating is a third rating, the third rotor portion including the first and second rotor portions, and wherein the stator core is configured to be disposed adjacent the third rotor portion when the output rating is the third rating.

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1-3** are rejected under 35 U.S.C. 102(b) as being fully anticipated by **Crapo et al (US 6,707,209)**.

Crapo discloses an electrical machine having an output rating, the electrical machine comprising:

a shaft (not shown); however, inherently be part of the rotor to rotatably support the rotor about an axis; a rotor (18, 108) (figs 1-11) coupled to the shaft and rotating with the shaft, the rotor configured to include a first rotor portion when the output rating is a first rating and include a second rotor portion when the output rating is a second rating; and a stator including a stator core having a fixed cross-sectional profile with respect to the axis, the stator core configured to be disposed adjacent to the first rotor portion when the output rating is the first rating and disposed adjacent to the second rotor portion when the output rating is the second rating, wherein the second rotor portion includes the first rotor portion (fig 11);

the rotor is configured to include a third rotor portion (fig 11) when the output rating is a third rating, the third rotor portion including the first and second rotor portions, and wherein the stator core is configured to be disposed adjacent the third rotor portion when the output rating is the third rating.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over each individual references: **Iwaki , Hoemann, Crapo**, as each applied in the rejections against the base claims and in view of level of ordinary skills of a worker in the art.

Each individual references: **Iwaki , Hoemann, Crapo** discloses the claimed invention, except for the added limitations of the following:

- (1) the numbers of second axial sections is greater than that of the first axial sections;
- (2) the arc of skew angles (beta-1, beta-2);
- (3) the axial length of the each axial section is the same,
- (4) the herringbone pattern of the sections, and
- (5) the ratio range of the axial section total length (Lx) and the length (Lm)

corresponding to the length of the rotor for the maximum output rating (Pm) to be

$$(0.75(P_x/P_m) < L_x/L_m < 1.5(P_x/P_m)).$$

Those skilled in the art, would understand that individually both Iwaki and Hoemann disclose a magnet rotor wherein the magnets are configured to be skewed in plural sections and in various patterns.

Furthermore, the skilled in the art would know that the arc of skew angle in the rotor, the number of axial sections, as well as the length and magnetization pattern of the rotor is all relates to the preferred design output rating of the electrical machine.

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Thus, it would have been to one skilled in the art at the time the invention was made to modify the machine, disclosed by Iwaki, Hoemann, or Crapo, by configuring the following specific configurations: the numbers of second axial sections is greater than that of the first axial sections; or the arc of skew angles (β_1 , β_2); or the axial length of the each axial section is the same, or the herringbone pattern of the sections, or the ratio range of the lengths L_x/L_m . These modification of the rotor's features are a matter of obvious engineering design choice based upon a particular electrical structure and operational characteristic of the machine. Doing so would provide the machine with designed rotor features that would to enable the machine to obtain specific preferred power rating for a particular industrial application of the machine. Such modifications require only necessary ordinary skills in the art because it has been held that respectively a change in size or shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955) (emphasis added), and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

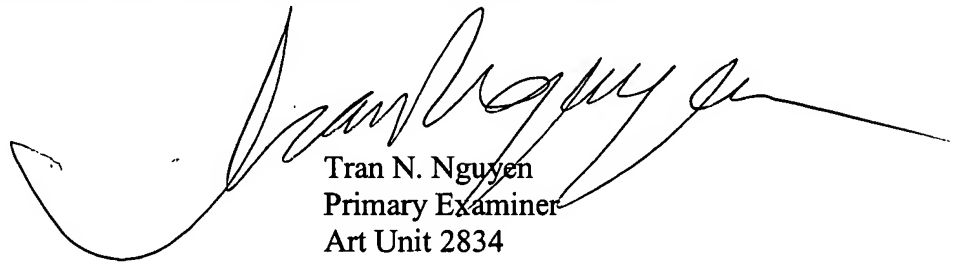
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tran N. Nguyen
Primary Examiner
Art Unit 2834